Oberspree Cable Plant	Employees (number of men)	Area (square meters)	Installed Engine Power (kdlowatts)
	250	6,500	340
Communications cable	350	22,100	1,900
Power current cable		·	3,900
Wire factory	1,060	25,300	0,000
	220	10,800	4,060
Copper plant	365	8,600	3,830
Rubber plant	100	5,300	1,865
Pressing and stamping plant	190	3,000	du airid ura

Number of employees montioned above includes only productive workers, not administrative personnel, etc.

Products:

Communication cable:

The only product of importance is carrier current cable, with production amounting to about fifty kilometers monthly (32 pairs of conductors for approximately 200 conversations), the cable having an outside diameter of about 50 millimeters. Production amounted to about 500 kilometers in 1947 and about 700 kilometers in 1948. Equivalent quantities were delivered by the Voegl Cable Plant in Koepenick.

The only experimental project is research on coaxial cables (also high-frequency carrier cables) with seven coaxial conductors in one cable which make it possible for one cable to carry approximately 1,000 conversations.

New installations: Electrolytic lead refinery, ovidently meant to turn out from 50-100 tons monthly. About eight electrolyte vats are installed in the factory hall, which measures about 80 \times 20 meters. Power current cable:

Monthly production consists of about 150-250 kilometers of cable of all sizes and all voltages (up to 250 square millimeters and 35

actor

SEGNET

kilovolts). A very important product, which is not being manufactured at present, is floating cable. This cable has a hollow inner part, covered by an insulation layer, followed by a layer of copper conductors with high-amperage insulation, followed by insulation, lead covering, and metal reinforment. This cable is produced in lengths of about 200 meters, with an outside diameter of about 100 millimeters. Annual production amounts to about 1000 kilometers. The production of this type of cable was atopped in November for unknown reasons and is supposed to start again, but at present it is still at a standstill. Wire factory:

Large volume of production of materials for line installations of all types. Because of material shortages there are interruptions in production at present.

Production consists of about 50 kilometers of rubber mine cable monthly.

Copper plant:

1 1

Output about four to six tons of copper daily (about one-sixth of the 1945 production).

In addition, this plant has been producing about two to three tons of flat rolled iron daily since October 1948.

Copper processing includes rolling wire to 6.35 millimeters diameter, then further processing it by drawing the wire down to 0.05 millimeters diameter.

Production of special copper sections for collectors.

Rubber plant:

Rubber production is based mainly on the buna process.

Production satisfies about 95 per cent of the plant's own needs (for the manufacture of lines and cables, and for sheet rubber). Rubber casings about 3 millimeters in thickness, to be used to protect metal containers from acids, were produced.

Large numbers of rubber soles and heels are also produced.

SECTION

Pressing and stamping plant:

One-sided activity for the textile industry. Production of textile spools as substitute for wooden spools has amounted to about one million spools monthly to date.

Recently production of spindles for the textile industry has been started.

Transformer plant:

About 200 to 300 transformers up to 10 kva are being produced monthly, while only repair work is being carried out on transformers of over 10 kva and up to 20 kva. Production of transformers of over 10 kva is impossible because the necessary machines, oranes, and other equipment were shipped east by the Russians before 1945.

There are frequent interruptions in the production of thansformers up to 10 kva, because the sheet metal for transformers is not
supplied in sufficient quantity and quality (in particular there is a
lack of ferrosilicon). Most of the sheet-metal is supposed to have
come from the Western Zone by illegal means (black market) to date.

Apparatus construction (production of high-voltage switches and accessories):

The Russian purchasing and supervising officer, Major Nanucholin, returned to the USSR on 15 January 1949. Only one official, Captain Kordyeyeff, is at the plant.

Because of shortages of materials, production in general had to be curtailed. The porcelain situation is catastrophic. Of the insulators supplied for the production of generating switches, only about two percent are usable. Lately the Neuhaus/Thueringen porcelain factory (presumably a branch of a Russian firm) has been carrying out experimental production of pin insulators for 100 and 200 kilovolts. Of the forty insulators delivered during this year only one was usable; all others had to be scrapped. Current experiments on high-voltage switches have been curtailed to a great extent.

GEGMET

Outstanding engineers are being transferred to the Main Department.

For this reason numerous dismissals are expected in the Main Department.

Efforts are being made to get in touch with engineer

Schiborowski (presumably living in the French Zone), an expert in construction development.

Since the orders being worked on at the present time must be financed from East Zone taxes, and since tax income has decreased to a great extent, the production program of the plant is behind schedule. To this must be added the increasing difficulties in obtaining materials.

Following is the delivery quota of apparatuses for February (scheduled program of 21 Jan 1949).

Dolivery quota for l'obruary 1949:

	The second name of the last of								
2	Oil switche	5 ,		100	kv,	600	amperes,	1000	mva.
39	Pressure ga	s switches,		10	11	400	11		
27	11	11		10	11	1000	11		
1	11	11		10	11	600	11		
15	Three-pole	separating	switches,	1.0	"	4000	11		
5	11	11	и	ΤQ	**	600	11		
50	11	11	11	20	11	400	11		
200	11	11	(1	10	11	200	11		
30	Fusos,			20) 11				
2	Duots,			4.8	; 11				
1		duct.		110) "				
200		r excess vo	ltago,	0.7	75 l	CV			
10				100	ם וכי	т Дрог	sibly co	nneot	ed with PO 17
2					o "	-			
Z	Supports (Stuetzer), 100 "								

- 92 Lever drives for pressure gas and separating switches.
- 8 Motors for gas switches (Hartgasschalter)
- 4 Buchholtz relays
- 8 Maximum relays
- 32 Valves
- 2 Magnets

OLUME

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The above quota can be fulfilled by only about 30 per cent because material shortages (porcelain, precious metals, steel screws, and high-grade spring steel) are great and it seems that Eastern Zone supplies alone are not sufficient to overcome them.

Production to date and current production have been carried out by using materials seized by the Red Army when it first occupied the Zone. In general it can be said that the SED is putting heavy pressure on the employees, through its functionaries who are followers of the party-line, in order to create a favorable impression on the occupying power. Employees go along with this policy on the surface, but without agreeing with the ideology of the SED or the occupying power.

The rolling mill in Mettetedt cannot continue its production of varnished timplate for the can industry because it lacks the necessary varnish.

This firm has dismissed its plant manager—a formor stoker—effective

This firm has dismissed its plant manager—a formor stoker—effective

immediately, for incapability and corruption. Number of employees at

present is 100, making the plant overstaffed. Dismissal of about 40

men is imminent because of shortages of raw materials. Production

consists of 60 tons, lacquer monthly for use on Russian tanks. There

are still about 10 tons of wood oil and three tons of rosins in stock,

dating back to 1945, and in addition a great number of packing materials.

The "planless planned economy" assigns quotes to firms on the basis of the production program, without allotting them the component parts necessary to meet these quotes. Above all this firm lacks linesed oil.

The Luedicke & Co. firm is supposed to take over the Mook firm in the Eastern Sector which was formerly the so-called "procumement and distribution" firm. This means that Luedicke & Co. will continue to produce in the same manner as they have to date, but in addition

they will distribute their own products and also the products of other varnish factories in the Teltow district.

Eight plant managers—chief chemists—are wanted badly by the Brandenburg lacquer industry, because the people who held the jobs up to 1945 were deported to an unknown destination and their replacements are laymen, chosen only for political considerations, and they know nothing about lacquer manufacture. Tempting offers are said to have been made to chemists who have fled to the Western Zone, but naturally they have paid no attention to such offers.

During a secret conference of the press department of Berlin Radio (Eastern Zone transmitter), a representative of the German Economic Commission mentioned that the Soviet Military Administration willintroduce a new Eastern Zone currency after 21 February 1949.

The new type of currency is ready for distribution to Eastern Berlin people who can show their new identity cards.

Marginal remark: Hadn't happoned by 3/3/49]

23 Fab 1949

STAT

1. Communication Cable.

Experiments with coaxial cables are still going on and construction details, to be made known very shortly. It is not yet known when production is to start or what the expected production quota will be. At present, efforts are being made to get in touch with laboratory engineers.

Electrolytic load refining has started at a rate of about 20 tons.

2. Power Current Cable. (Floating cable)

- a) Construction: The fleating cable mentioned in Report No. 1 is of the following construction: Air-tight timplate cylinder; about 80 millimeters in diameter and 30 millimeters in width; between every two containers a rubber buffer about 10 millimeters thick; a layer of rubber covering the containers, followed by a layer of copper conductors (in case of power current insulation, two rubber coverings), followed by a thin layer of insulation, and a light reinforcement; this cable, having an outside diameter of about 100 millimeters, is capable of floating without any additional aid.
- b) Presumed use: The floating cable is to be taken along by warships on combat missions and laid down surrounding the ship.

 Electric current is to be sent through the copper conductors. This current sets up a strong electrical field around the warship. Any defensive or submarine weapons (e.g. torpedoes, mines, etc.) which are fired directly at the vessel, or are attracted to the ship's vicinity automatically by means of sound, thus enter the field of force before reaching the ship or the protective nets and are rendered harmless without exploding.
- c) Production: Production has not yet been resumed and there are no signs that it will be resumed very soon.

3. Copper plant.

Copper wire production has decreased by about 20 percent because of an interruption in deliveries, for reasons unknown, from the Mans-

feld metallurgical plant. Beliveries direct from the USSR are supposed to start coming in regularly.

4. Apparatus construction.

Difficulties in obtaining materials remain unchanged.

The poor quality of porcelain for insulators remains catastrophic. Six experimental insulators for 100-kilovolt switches, delivered by the Neuhaus firm in Thuringia on 15 February 1949, were completely useless.

Work in the so-called "water construction", the Russian research laboratory, which is under strict Russian control, has been further curtailed. Presumably experiments on new-type meters and relays are carried on in this laboratory. Furthermore, materials are analyzed there. Efforts are being made to get in touch with engineers from the laboratory.

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26 Feb 1949

Floating cable.

The following information on this cable completes and partly modifies the information given in Report No. 2 on its construction, and also lists additional possibilities for its potential use. The description in Report No. 2 refers only to experimental production in limited quantity. The final, most recent type of construction, for which manufacturing operations have been set up, is as follows (see sketch):

Cylindrical hollow body, made of aluminum, 0.75 millimeters thick, consisting of two halves put together and scaled with scaling-cement; outside diameter 80 millimeters, longth 66 millimeters, weight 56 grams. Between the hollow cylinders are buffers made of foam rubber, 10 millimeters thick, weight about 40 grams per buffer. Covering the hollow cylinders are: a rubber layer, a weven fabric layer, another rubber layer, and 144 rubber-insulated copper wires 1.2 millimeters in diameter, distributed evenly around the circumference. Covering them, another series of rubber, woven fabric, and rubber, then 144 more rubber-insulated copper wires 1.2 millimeters in diameter, covered by a rubber layer, a woven fabric layer, and another rubber layer. Outer diameter is 99.4 millimeters. Radius of flexibility for the completed floating cable is 1000 millimeters. Lengths of individual sections are 280 meters and 205 meters. In addition there are sloeve connections in order to be able to connect floating cables and make them longer. Furthermore, end-pieces for cables have been developed and are being manufactured to be used to connect floating cables to submarine cables and to land cables. Weights per meter of cable:

Hollow cylinders and rubber buffers Two layers of copper wires, including 6 percent twist

1230 grams

3080

3280 Woven fabric and rubber insulations

7590 Total

SECHET

as compared with the displacement of water

7740 grams.

The floating cable described here is part of the

PO1 Project

All employees working on this project were sworn to "secrety" by the Russians, and correspondence dealing with it is marked "Secret".

For reasons of camouflage additional parts, equipment, etc., were ordered from other factories. Therefore, one should pay particular attention to PO1 markings appearing on products of other factories or laboratories. The use of the cable reported in Report No. 2 is only one of the possibilities.

Copper plant:

The amount of copper required up to June 1949 in order to meet the allotted quota is 1500 tens. Because of the tense raw material situation, the Soviet Military Administration fixed the amount of copper to be supplied at 1000 tens, and it was reported that deliveries from the USSR would arrive within the next few days.

Communication cable:

The lead obtained in the lead refining plant is used exclusively for the production of storage batteries. Because delivery of sorage lead is slow and delayed, the quota of 100 tens cannot even be approached (at present only 20 tens has been reached). The chronic shortage of lead causes interruptions in covering communication cables.

Terms used in sketch of floating cable:

Sohwimmkabel floating cable

Masstab 1:1 Scale 1:1

je 144 Cu-Drachte 1, 2 Ø 144 copper wires, 1.2 millimeters in

diameter in each layer.

Gewebeband und Gummischichten woven fabric and rubbor layers

Hohlkoerper hollow cylinder

" 80 ø " " 80 millimeters in diameter

Schaumgummi foam rubber

SECRET

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Kabel-Querschnitt

cross section of cable

Kabel-Laengs-Schema

cable, linear sketch

Aluminium 0,75

aluminum, 0.75 millimeters

Dichtungskitt

sealing coment

Coaxial cable.

This cable, at present in experimental stage, consists of seven cables, with six cables twisted at two percent around a center cable.

Inside, all seven cables are alike.

One copper conductor, 1.5 millimeters in diameter, is held in the center by Calit* plates about three millimeters thick and about 50 millimeters apart. In order to prevent these plates from changing their position or distance, the lead gover is pressed in (making small grooves), thoroby preventing the movement of the plates in either direction. Twenty-four copper conductors, 0.8 millimeters in diameter, twisted in pairs at an eight percent twist and insulated with paper double-coated with paraffin, are arranged within a radium of about 14 millimeters from the center conductor, leaving an air insulation space. The 0.8-millimeter conductors are hold in cylindrical shape by woven fabric and layers of rubber. The whole thing is encased in a thin load cover 20 millimeters in diameter. Because the central conductor of 1.5 millimeter diameter moves as much as 100 millimeters in the process of laying about 200 meters of cable, a hollow space is left at both ends of the cable and springs are set in it which hold the conductor rigid while the cable is being laid. After the cable has been laid, the hollow space and the springs are removed and cable connections are made in the customary manner. Experiences on similarly constructed cables (e.g. wide band cable for television broadcasting) have shown that in the process of picking up and re-laying a cable of this type about 70 percent of its length is destroyed. The six outside cables are held together around the center cable by tape made of impregnated fabric. Up to 150 conversations can be carried on over each of the seven cables, making a total of over 1000 conversations for all seven. The coaxial cable is still in its experimental stage. *Calit -- trade name of a plastic insulation material.

Possible quotas to be produced later are not yet known. (See next page for sketch of cable)

Sketch of coaxial cable.

Terms used in sketch of coaxial cable:

Kabel-Querschnitt cross-section of cable

24 Cu-Adorn 0,8 Ø 24 copper conductors 0.8 millimeters in

diameter

Hohlraum hollow space

Mittelleiter Cu 1,5 Ø Center conductor, copper, 1.5 millimeters

in diameter

Kabel-Lacngsschnitt linear sketch of cable

Calitschoibe Calit plates

impraegniortes Gewebeband tape made of imprognated fabric

Bleimantel lead cover

am Umfang eingerillt pressed in (making grooves) around the

circumference.

STAT

BALTIC-BLACK SEA NAVIGABLE CANAL

This document is a re-working of a plan proposed by Doctor M. Mata-kiewics, a professor at the Lvov Polytechnical School, and published in 1927 in "Przeglad Techniczny." It points out some errors in the calculations of the original project - establishing the length of the canal at 2,111 kilometers and not the length of 1,891; kilometers as given in the original; the errors are in the difference of the distances from Cernauti to Ungheni and from Ungheni to the Danube River.

At the end of the document there are included: maps, sketches of the normal profile of the canal for three sectors, the dimensions of the locks and the variations in levels from kilometer point 630 to kilometer point 1,894 (Matakiewicz's project), and, finally, a sketch of the sector of the canal between the Frut and Daestr Rivers.

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Review of PROISVODETVO SHARIKOV DLYA PODSHIPNIKOV KACHENIYA

(Production of Ball Bearings) by B. M. Oseledchik.

PA 17/41732

Engr S. Baykov

50X1-HUM

The book is criticized for being a bad repetition of prewar material selected at random from the old files of the Sverdlovek 6th State Bearing Plant and the periodical "Podshipnik." It contains no reference to new methods of working used at the 1st State Bearing Plant. It does not mention a word about new models of presses, machine tools for grinding, filing or finishing ball bearings; or new designs for attachments and tools put in use since 1946. Advanced designs such as Domokurov's finishing machine, the 1-GPZ grinder, centerless grinders, filing wheels with straight teeth, sectional filing wheels, 800-1000-millimeter cost from wheels and other production equipment were also ignored.

The conclusion of the review is that the author of this book knows nothing about the industry on which he writes.

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